AMENDMENT TO THE SPECIFICATION

Please amend the specification as follows:

After paragraph [010] on page 3, please insert the following new heading and paragraph:

Brief Description of the Drawings

Fig. 1 shows the differing polymer morphology that results from a conventional radical polymerization process as compared to that resulting from a controlled radical polymerization process.

Fig. 2 shows three styrene/methacrylic acid gradient copolymers obtained using different amounts of starting monomers, with the white units corresponding to styrene units and the dark units corresponding to methacrylic acid units.

Fig. 3 shows the calculated degree of incorporation of styrene/methacrylic acid mixture in a gradient copolymer as a function of monomer conversion.

Fig. 4 shows a possible representation of the morphology of a copolymer according to Example 1, wherein the darkened units denote the styrene/methacrylic acid linkages, and the white units denote the ethyl acrylate linkages.
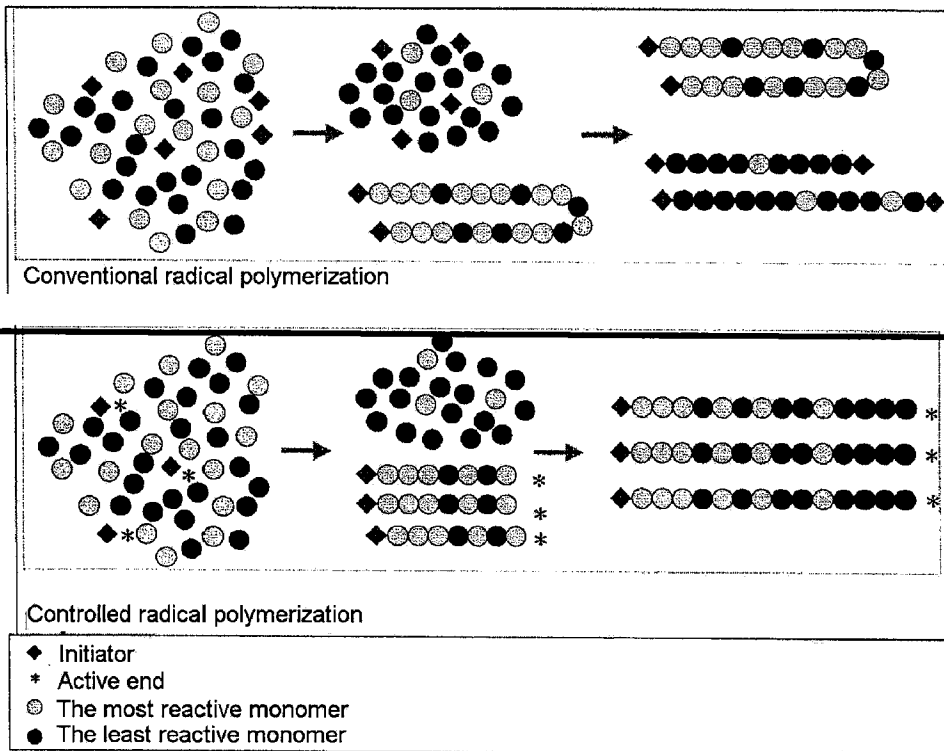
Fig. 5 shows the calculated gradient for each monomer in the gradient copolymer of Example 4.

Please amend page 8, paragraph [034] as follows:

[034] In the case of random polymers, the variation of the monomers along the polymer chain will normally not be gradual, regular and predictable. As shown in Fig. 1, the following scheme for illustration purposes, a random polymer obtained by classical

radical polymerization of two monomers will differ from a gradient copolymer in the distribution of the monomers, in that a random polymer is normally not identical on all the chains, nor in the length of the chains, which is normally not identical for all the chains.

Please delete the illustration on page 9:

Conventional radical polymerization

Controlled radical polymerization

◆ Initiator
✱ Active end
◉ The most reactive monomer
● The least reactive monomer

Please amend paragraph [050], page 12 and 13 as follows:

[050] Although the copolymers described are all gradient copolymers of styrene and methacrylic acid, the difference in the initial concentration of the monomers leads to chains with completely different structures, conferring on the copolymers different

properties. ~~This example therefore~~ Fig. 2 illustrates the influence of the initial monomer compositions on the arrangement of the various monomers along the chain.

Please amend paragraph [051], page 13 as follows:

[051] In the case of a styrene/methacrylic acid gradient copolymer, the different polymers obtained can be represented <u>as shown in Fig. 2.</u> ~~schematically as follows, with the white units corresponding to styrene and the dark units corresponding to methacrylic acid:~~

Please delete illustration shown on page 13, after paragraph [051].
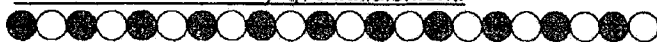
10% methacrylic acid initially:

Copolymer with a very low gradient, for which nanostructurization cannot be expected.

20% methacrylic acid initially:

Copolymer with a hydrophilic "head" and hydrophobic "tail", with a gradient that is sufficiently pronounced to lead to nanostructurization.

50% methacrylic acid initially:

Since the monomers are isoreactive in these conditions, the copolymer obtained is of the alternating type.

Please amend paragraph [0193], page 54 as follows:

[0193] Calculation of the gradient by simulation gave the curve shown <u>in Fig. 3</u> ~~below~~. Theoretical prediction gave 30% incorporation of the mixture (styrene/methacrylic acid) and 70% ethyl acrylate.

Please delete illustration shown on page 55, before paragraph [0196].

**Incorporation of the STY, MAA mixture as a function
of the conversion (initial acrylate content: 80%)**
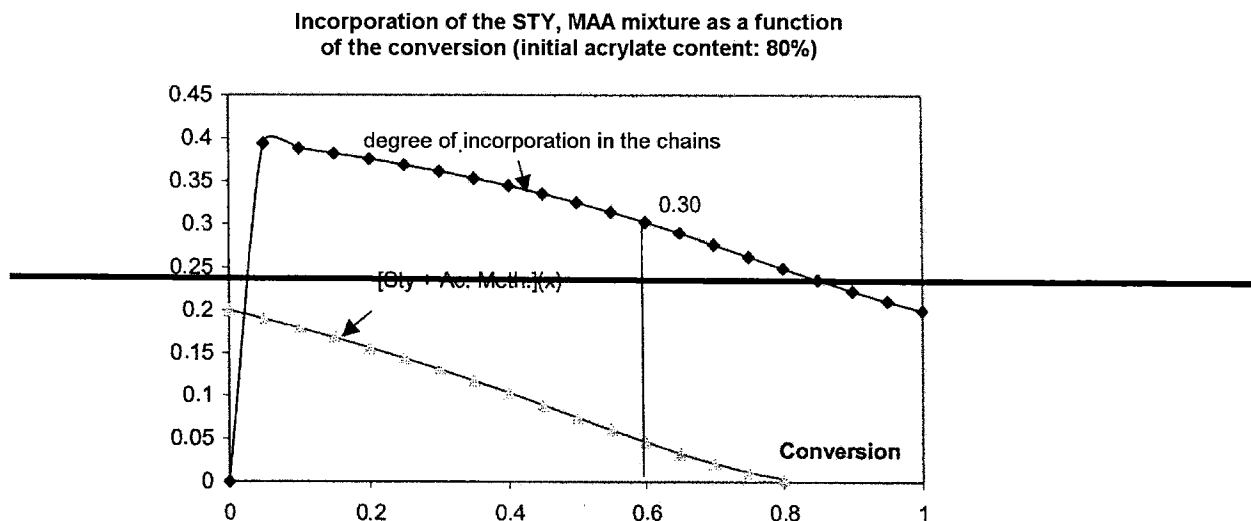
Please amend paragraph [0199], page 55 as follows:

[0199] ~~The following~~ Fig. 4 was a possible schematic representation of the copolymer obtained: wherein the darkened units denote the styrene/methacrylic acid linkages, and the white units denote the ethyl acrylate linkages.

Please delete illustration shown on page 55, in the middle of paragraph [0199].

Please amend paragraph [0212] on page 59 as follows:

[0212] It was noted that each monomer was present throughout the reaction. The gradient determined for each monomer could then be calculated, and gave the ~~following curves:~~ curves as shown in Fig. 5.

Please delete the illustration shown on page 59, after paragraph [0212].